

Title (en)  
Coding method, coding apparatus, decoding method and decoding apparatus using subsampling

Title (de)  
Verfahren und Gerät zur Kodierung/Dekodierung unter Verwendung der Unterabtastung

Title (fr)  
Procédé et dispositif de codage et de décodage utilisant le sous-échantillonnage

Publication  
**EP 1248468 A3 20050824 (EN)**

Application  
**EP 02006349 A 20020321**

Priority  
JP 2001093675 A 20010328

Abstract (en)

[origin: EP1248468A2] A coding apparatus includes: a context generator generating a context signal from a reconstructed symbol; a predictor generating a prediction signal indicating a prediction value which is a prediction of a symbol to be coded, based on the context signal, and a prediction error signal which is a difference between the prediction value and the symbol; a quantizer generating a quantized prediction error signal by quantizing the prediction error signal; an encoder coding the quantized prediction error signal by referring to the context signal; an inverse quantizer subjecting the quantized prediction error signal to inverse quantization so as to generate a reconstructed prediction error signal; an inverse predictor subjecting the reconstructed prediction error signal to inverse prediction so as to generate a reconstructed sampled signal; a subsampling control circuit generating a subsampling control signal indicating whether or not the symbol should be subject to subsampling; and an interpolator referring to the subsampling control signal so as to subject to interpolation the reconstructed sampled signal corresponding to the symbol subject to subsampling, characterized in that the coding apparatus codes symbols while adaptively employing subsampling. <IMAGE>  
[origin: EP1248468A2] A sub-sampling control circuit (8) generates control signal indicating whether symbol is to be sub-sampled at the end of encoding process. An interpolator (7), interpolates the reconstructed sampled signal corresponding to the symbol subject to sub-sampling, based on control signal. Independent claims are included for the following: (1) Decoding apparatus; (2) Encoding method; and (3) Decoding method.

IPC 1-7  
**H04N 7/34; H04N 7/46**

IPC 8 full level  
**H04N 19/50** (2014.01); **H03M 7/36** (2006.01); **H04N 1/41** (2006.01); **H04N 19/124** (2014.01); **H04N 19/132** (2014.01); **H04N 19/134** (2014.01); **H04N 19/136** (2014.01); **H04N 19/137** (2014.01); **H04N 19/147** (2014.01); **H04N 19/182** (2014.01); **H04N 19/186** (2014.01); **H04N 19/196** (2014.01); **H04N 19/27** (2014.01); **H04N 19/59** (2014.01); **H04N 19/593** (2014.01); **H04N 19/91** (2014.01)

CPC (source: EP US)  
**H04N 1/41** (2013.01 - EP US); **H04N 19/124** (2014.11 - EP US); **H04N 19/13** (2014.11 - EP US); **H04N 19/132** (2014.11 - EP US); **H04N 19/136** (2014.11 - EP US); **H04N 19/147** (2014.11 - EP US); **H04N 19/149** (2014.11 - EP US); **H04N 19/169** (2014.11 - EP US); **H04N 19/186** (2014.11 - EP US); **H04N 19/46** (2014.11 - EP US); **H04N 19/59** (2014.11 - EP US); **H04N 19/593** (2014.11 - EP US)

Citation (search report)

- [Y] EP 0798930 A2 19971001 - FUJITSU LTD [JP]
- [A] EP 0820198 A2 19980121 - SONY CORP [JP]
- [DY] PATENT ABSTRACTS OF JAPAN vol. 0132, no. 54 (E - 772) 13 June 1989 (1989-06-13) & EP 0305127 A2 19890301 - SONY CORP [JP]
- [Y] "LOSSLESS AND NEAR-LOSSLESS CODING OF CONTINUOUS TONE STILL IMAGES (JPEG-LS)", ISO/IEC JTC1/SC29/WG1 FCD 14495 - PUBLIC DRAFT, XX, XX, 16 July 1997 (1997-07-16), pages I - IV,1, XP002260316
- [Y] KNEE M J ET AL: "Bandwidth compression for HDTV broadcasting: investigation of some adaptive subsampling strategies", BBC RESEARCH DEPARTMENT REPORT, XX, XX, no. 9, July 1988 (1988-07-01), pages 1 - 13, XP002138813
- [A] CHEUNG W N ED - YUAN BAOZONG (ED) INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS: "Adaptive subsampling for image data compression", PROCEEDINGS OF THE REGION TEN CONFERENCE (TENCON). BEIJING, OCT. 19 - 21, 1993, BEIJING, IAP, CN, vol. VOL. 3, 19 October 1993 (1993-10-19), pages 938 - 941, XP010113635, ISBN: 0-7803-1233-3
- [A] BELFOR R A F ET AL: "SPATIALLY ADAPTIVE SUBSAMPLING OF IMAGE SEQUENCES", IEEE TRANSACTIONS ON IMAGE PROCESSING, IEEE INC. NEW YORK, US, vol. 3, no. 5, 1 September 1994 (1994-09-01), pages 492 - 500, XP000476826, ISSN: 1057-7149
- [A] SORIAL H Z ET AL: "Nonuniform weighted subsampling for digital image compression", ELECTRICAL AND COMPUTER ENGINEERING, 1995. CANADIAN CONFERENCE ON MONTREAL, QUE., CANADA 5-8 SEPT. 1995, NEW YORK, NY, USA, IEEE, US, vol. 1, 5 September 1995 (1995-09-05), pages 571 - 574, XP010193742, ISBN: 0-7803-2766-7

Cited by  
CN104811707A; WO2008008714A1; WO2006039382A3; US8275045B2

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**EP 1248468 A2 20021009; EP 1248468 A3 20050824; CA 2376720 A1 20020928; CA 2376720 C 20051122; JP 2002290243 A 20021004; US 2002141649 A1 20021003; US 6898322 B2 20050524**

DOCDB simple family (application)  
**EP 02006349 A 20020321; CA 2376720 A 20020313; JP 2001093675 A 20010328; US 9694402 A 20020314**